UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/682,041	10/09/2003	Diane Lebel	200301798-2	8151

7590 03/17/2005

HEWLETT-PACKARD COMPANY
Intellectual Property Administration
P. O. Box 272400
Fort Collins, CO 80527-2400

EXAMINER	
ABEL JALIL, NEVEEN	
ART UNIT	**PAPER NUMBER**
2165	

DATE MAILED: 03/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	**Application No.** 10/682,041	**Applicant(s)** LEBEL, DIANEO	
	Examiner Neveen Abel-Jalil	**Art Unit** 2165	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 November 2004*.
2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17,19-22,24-46,48-70 and 72* is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) *1-17 and 49-66* is/are rejected.
7)☒ Claim(s) *19-22,24,43-46,48,67-70 and 72* is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a)☐ All b)☐ Some * c)☐ None of:
1.☐ Certified copies of the priority documents have been received.
2.☐ Certified copies of the priority documents have been received in Application No. _____.
3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

SAM RIMELL
PRIMARY EXAM

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Remarks

1. The Request for Reconsideration filed on December 2, 2004 has been received and entered. Claims 1-17,19-22,24-46,48-70 and 72 are pending.

2. The Examiner withdraws previous status consideration and hereby acknowledged the proper status of the current application as a continuing application filed under 37 CFRξ 1.53(b) in which the parent case survives.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-5, 9-15, 25-29, 33-39, 49-53, and 57-63 are rejected under 35 U.S.C. 102(b) as being anticipated by Josten et al. (U.S. Patent No. 5,574,902).

As to claims 1, 25, and 49, Josten et al. discloses a method for delaying asynchronous writes in a distributed file system to which a unique identifier is assigned, comprising:

buffering a page of dirty data with the unique identifier upon writing to a the server (See Josten et al. column 8, lines 46-63);

changing the unique identifier to create a current unique identifier that is assigned to the distributed file system upon a failure of the server (See Josten et al. column 7, lines 1-60);

comparing the buffered unique identifier with the current unique identifier when the page is requested while the page is in a written state (See Josten et al. column 8, lines 4-17); and

handling the request responsive to the comparison (See Josten et al. column 8, lines 57-63).

As to claims 2, 26, and 50, Josten et al. discloses further comprising assigning the unique identifier (See Josten et al. column 4, lines 45-58).

As to claims 3, 27, and 51, Josten et al. discloses wherein assigning the unique identifier comprises assigning a sequence number (See Josten et al. column 7, lines 1-60).

As to claims 4, 28, and 52, Josten et al. discloses wherein assigning the sequence number comprises assigning a cluster-wide sequence number (See Josten et al. column 9, lines 35-59).

As to claims 5, 29, and 53, Josten et al. discloses wherein changing the unique identifier in the encoded method comprises incrementing the sequence number (See Josten et al. abstract).

As to claims 9, 33, and 57, Josten et al. discloses wherein the dirty page transitions to a written state upon the write to the server (See Josten et al. column 4, lines 26-44).

As to claims 10, 34, and 58, Josten et al. discloses wherein the written page is handled by the encoded method as though in the dirty state when the page is in the written state (See Josten et al. column 10, lines 24-58).

As to claims 11, 35, and 59, Josten et al. discloses wherein buffering the written page with the unique identifier comprises caching the written page with the unique identifier (See Josten et al. column 4, lines 8-58).

As to claims 12, 36, and 60, Josten et al. discloses wherein caching the written page with the unique identifier comprises caching the written page with the unique identifier on the client (See Josten et al. column 4, lines 45-58).

As to claims 13, 37, and 61, Josten et al. discloses wherein changing the unique identifier comprises incrementing the unique identifier (See Josten et al. column 4, lines 45-58).

As to claims 14, 38, and 62, Josten et al. discloses wherein comparing the buffered unique identifier with the current unique identifier comprises determining whether the current unique identifier is a numerically higher value (See Josten et al. column 11, lines 28-67).

As to claims 15, 39, and 63, Josten et al. discloses wherein handling the request responsive to the comparison comprises:

storing the buffered written page to disk storage if the buffered unique identifier differs from the current unique identifier (See Josten et al. column 4, lines 8-44); or

performing a file sync operation if the buffered unique identifier matches the current unique identifier (See Josten et al. column 3, lines 1-21, prior art).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 6-8, 16-17, 30-32, 40-42, 54-56, and 64-66 are rejected under 35 U.S.C. 103(a) as being unpatentable over Josten et al. (U.S. Patent No. 5,574,902) in view of Martin et al. (U.S. Patent No. 10/682,041).

As to claims 6, 30, and 54, Josten et al. does not teach wherein buffering the dirty page comprises storing the unique identifier in a header of the page.

Martin et al. teaches wherein buffering the dirty page comprises storing the unique identifier in a header of the page (See Martin et al. column 4, lines 35-67).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Josten et al. to include wherein buffering the dirty page comprises storing the unique identifier in a header of the page.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Josten et al. by the teaching of Martin et al. to include wherein buffering the dirty page comprises storing the unique identifier in a header of the page because it provides for efficient processing and accurate garbage collection (See Martin et al. column 1, lines 54-62).

As to claims 7, 31, and 55, Josten et al. as modified teaches wherein buffering the written page with the unique identifier comprises in returning the page to a least recently used queue (See Josten et al. column 4, lines 45-58, although it stays it does not require LRU, its is being disclosed and therefore interpreted as prior art, also see Josten et al. column 8, lines 46-56).

As to claims 8, 32, and 56, Josten et al. does not teach wherein buffering the written page with the unique identifier comprises returning the page to a least recently used queue.

Martin et al. teaches wherein buffering the written page with the unique identifier comprises returning the page to a least recently used queue (See Martin et al. column 1, lines 43-60, prior art).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Josten et al. to include wherein buffering the written page with the unique identifier comprises returning the page to a least recently used queue.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Josten et al. by the teaching of Martin et al. to include wherein buffering the written page with the unique identifier comprises returning the page to a least recently used queue because it provides for efficient storage and retrieval of used resources (See Martin et al. column 1, lines 54-62).

As to claims 16, 40, and 64, Josten et al. teaches writing the buffered dirty pages to the server in a single write operation (See Josten et al. column 8, lines 46-56,l wherein "single write" reads on "batch").

Josten et al. does not teach buffering a plurality of dirty pages before writing them to the server.

Martin et al. teaches buffering a plurality of dirty pages before writing them to the server (See Martin et al. column 4, lines 35-67).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Josten et al. to include buffering a plurality of dirty pages before writing them to the server.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Josten et al. by the teaching of Martin et al. to include buffering a plurality of dirty pages before writing them to the server because it reduces processing time and provides efficient garbage collection (See Martin et al. column 1, lines 54-62).

As to claims 17, 41, 42, 65, and 66, Josten et al. teaches writing the plurality of written pages to disk storage in a single write operation (See Josten et al. column 8, lines 46-56,l wherein "single write" reads on "batch").

Josten et al. does not teach buffering a plurality of written pages.

Martin et al. teaches buffering a plurality of written pages (See Martin et al. column 4, lines 35-67).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Josten et al. to include buffering a plurality of written pages.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Josten et al. by the teaching of Martin et al. to include buffering a plurality of written pages because it reduces processing time and provides efficient garbage collection (See Martin et al. column 1, lines 54-62).

Allowable Subject Matter

7. Claims 19-22, 24, 43-46, 48, 67-70, and 72 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form **including** all of the limitations of the base claim and any intervening claims.

8. The following is a statement of reasons for the indication of allowable subject matter:

The prior art of record (Josten et al. -U.S. Patent No. 5,574,902-and - Martin et al. –U.S. Patent 6,154,813) do not disclose, teach, or suggest the claimed limitations of (in combination with all other features in the claim), issuing an exclusive mode token from the server to a client to permit the client to dirty the page; issuing a shared mode token from the server to the client to permit the client to use, but not dirty, the page; revoking the exclusive mode token before issuing the shared mode token, as claimed in claims 19, 43, and 67.

Claims 20-22, 44-46, and 68-70 are objected to as allowed over the prior art made of record, because it is dependent from the objected to claims 19, 43, and 67, respectively.

The prior art of record (Josten et al. -U.S. Patent No. 5,574,902-and – Martin et al. –U.S. Patent 6,154,813) do not disclose, teach, or suggest the claimed limitations of (in combination with all other features in the claim), notifying the server from the client to update the modification time if the flag is still set at close time; and notifying the server from the client to forego updating the modification time if dirty data is sent lo the server after the file has been closed, as claimed in claims 24, 48, and 72.

Response to Arguments

9. Applicant's arguments filed on December 2, 2004 have been fully considered but they are not persuasive.

In response to applicant argument that "Josten does not teach changing the unique identifier to create a current unique identifier.... upon failure of a server, and comparing the buffered unique identifier with the current unique identifier..." is acknowledged but it is not deemed to be persuasive.

The Examiner respectfully points to Josten column 10, lines 40-57, wherein Josten's invention introduces the concept of an ordinal-number (ORD#) that has a unique and ever-increasing value per database within a DBMS instance. The current ORD# MAX is maintained in the FCB and is incremented by one to assign the next value to every newly-dirty page entry in DPL.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Neveen Abel-Jalil whose telephone number is 571-272-4074. The examiner can normally be reached on 8:30AM-5: 30PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dov Popovici can be reached on 571-272-4038. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Neveen Abel-Jalil
March 15, 2005

SAM RIMELL
PRIMARY EXAMINER